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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/044,786 | 01/11/2002 | Peter D. Geiger | 5143-03000 | 9379 |

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Jeffrey C. Hood
Conley, Rose, & Tayon, P.C.
P.O. Box 398
Austin, TX 78767

| EXAMINER |
|---|
| WILLIAMS, HOWARD L |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2819 | |

DATE MAILED: 12/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

| | Application N . | Applicant(s) |
|---|---|---|
| **Offic  Action Summary** | 10/044,786 | Dye et al |
| | **Examiner** | **Art Unit** | |
| | Howard L. Williams | 2819 | |

*-- The MAILING DATE of this communication app ars on the cover sheet with the correspondence address --*

**Peri  d for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *three* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED  (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-119* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8, 10-25, 27-38, 40-43, 45-48, 50-61, 63-119* is/are rejected.

7)☒ Claim(s) *9, 26, 39, 44, 49 and 62* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance.  See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of: .

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

A shortened statutory period for reply to this action is set to expire THREE MONTHS from the mailing date of this action. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

The number of claims presented is considered truly excessive.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless –*

*(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States,*

*(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.*

Claims 1-4, 10-14, 17-21, 28-34, 45, 46, 50-58, 61, 65-68, 76-78, 81, 85 and 100-102 are rejected under 35 U.S.C. 102(b) as anticipated by Franaszek et al. (US 5,729,228) or Mac Lean, Jr. et al. (US 5,109,226). Franaszek et al. discloses a parralel compression/decompression system which uses a plurality of compressors/decompressors operating in parallel concurrently upon different segments of the data stream of uncompressed/compressed data distributed to the respective processor to speed operation of the device. The Franaszek compressor/decompressor system applies a Lempel-Ziv algorithm. Mac Lean, Jr. et al. discloses a parallel compression/decompression system which uses a plurality of compressors/decompressors operating in parallel concurrently upon different segments of the data stream of uncompressed/compressed data distributed to the respective processor to speed operation of the device. The

Mac Lean Jr. et al. compressor/decompressor system applies an arithmetic/entropy/statistical algorithm.

Claims 1-5, 10-15, 17-22, 28-34, 45, 46, 50-59, 61, 65-69, 76-79, 81, 85 and 100-102 are rejected under 35 U.S.C. 102(e) as anticipated by Freking et al. (US 6,304,197 B1). Freking et al. discloses a parallel compression/decompression system which uses a plurality of compressors/decompressors operating in parallel concurrently upon different segments of the data stream of uncompressed/compressed data distributed to the respective processor to speed operation of the device. The Freking et al. compressor/decompressor system applies an Huffman/variable-length/statistical algorithm.

Claims 6-8, 16, 23-25, 27, 47, 48, 60, 63, 64, 70-75, 80, 82-84 and 103-112 are rejected under 35 U.S.C. 102(b) as anticipated by Franaszek et al. (US 5,729,228). The indicated claims are separated to Franaszek et al. alone because they recite terminology that appears most closely associated with Lempel-Ziv type compression which Franaszek et al. uses.

Claims 5, 15, 22, 59, 69 and 79 are rejected under 35 U.S.C. 102(b) as anticipated by Mac Lean Jr. et al. (US 5,109,226). The indicated claims in as much as they differ from the two reference rejection above are separated here because they included recitations drawn to statistical coding to which Huffman, VLC and arithmetic coders are often classified.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

Claims 35-38, 40-43 and 86-99 are rejected under 35 U.S.C. 103(a) as unpatentable over Franaszek et al. (US 5,729,228) in view of Cheng et al. (US 5,608,396). Franaszek does not disclose the compressor -deccompressor directly associated with memory devices as a memory controller/module. Cheng et al. illustrates the thoroughly obvious applications wherein the compressor-decompressor provides some of its best benefit-- interfacing with memory to reduce the amount of data storage required and transmission/receiving to reduce the time required. It would have been obvious to utilize the Franaszek compressor-decompressor in these type of applications to provide these well known and documented benefits of data compression.

Claims 113-119 are rejected under 35 U.S.C. 103(a) as unpatentable over Franaszek et al. (US 5,729,228). Franaszek discloses an escape code decoder and associated register which is stated as having copying the byte to the output. (col. 5, line 58+). In as much as flagging and passing raw input code (uncompressed) is extremely well known, it would have been equally, if not more,obvious to detect a flag marking such a range of data in an otherwise compressed string and pass the flagged data section to the output because it also would have been obvious to one of skill in the art that there would no need to attempt to decompress data that was not compressed.

Claims 9, 26, 39, 44, 49, 62 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fimoff (US 5,424,733) discloses parallel decoding of variable length codes to increase the speed and Allen (US 5,471,206) discloses parallel decoding of binary entropy codes, i.e. arithmetic codes.

Any inquiry concerning this communication should be directed to Howard L. Williams at telephone number 703-308-1679.

20 December 2002

Howard L. Williams
Primary Examiner
Art Unit 2819